Electronic versus paper-based nursing documentation systems: the caregivers weigh in

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Publication Details
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Abstract
Information technology (IT) solutions have the potential to free carers in long-term care facilities from well-known problems with burdensome paper-documentation, allow them more direct care-time with clients and improve the quality of nursing records. However, to date, little scientific evidence is available to support this idea. Besides the concern about return on investment, a big barrier for the slow uptake of IT solutions in long-term care is scepticism by managers about the capacity and willingness of older carers, most of them women, to use computers and the uncertainty about the potential change associated with introducing a new system. To my knowledge, no detailed study of carers’ satisfaction with electronic documentation in nursing homes has been conducted. Research appears to be lacking on this important area that directly relates to the quality of life for an increasing number of elderly who will live in nursing homes.

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The Carers Weigh In

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Running head: Carers’ acceptance of electronic documentation
To the Editor: Information technology (IT) solutions have the potential to free carers in long-term care facilities from well-known problems with burdensome paper-documentation, allow them more direct care-time with clients and improve the quality of nursing records. However, to date, little scientific evidence is available to support this idea. Besides the concern about return on investment, a big barrier for the slow uptake of IT solutions in long-term care is scepticism by managers about the capacity and willingness of older carers, most of them women, to use computers and the uncertainty about the potential change associated with introducing a new system. To my knowledge, no detailed study of carers’ satisfaction with electronic documentation in nursing homes has been conducted. Research appears to be lacking on this important area that directly relates to the quality of life for an increasing number of elderly who will live in nursing homes.

The purpose of this research was to test the feasibility of implementing clinical IT solutions in nursing homes. A quasi-experimental, comparative design was undertaken in two homes belonging to the same management group RSL Care in Queensland, Australia. The participants included 15 available staff in the home using the electronic system and 12 staff in the facility practicing paper-documentation. The areas to be investigated included participants’ basic demographic information; the norm about the usage of the relevant documentation system; participants’ computer literacy and attitudes towards using IT solutions; their capacity to use the electronic or paper-based system; their satisfaction with such a system and the information it provided. The research methods included semi-structured interviews and questionnaire survey based on the validated measurement scales (available from the author).
No significant differences were found between the two facilities in terms of participants’
gender (only one male participant at each site), age (ranged 20 to 60 and over in both sites),
job roles and aged care work experience (ranged 3 month to more than 10 years). The norm
for using the relevant documentation system was positive. In regard with computer skills, no
significant site difference was found for the 12 test items measuring IT skills required for the
carers to use the clinical IT system in trial. The majority of the carers in both sites appear to
have adequate basic computer skill for adapting to its use.

Five weeks after the IT system implementation, improvements in the three major problems of
paper-based systems, i.e. time requirements, accessibility and legibility, were identified as the
primary advantages of the electronic over the paper-based documentation. Except for these
differences, responses to the other measurement items were similar between the two sites.
Their familiarity with the relevant documentation system was similar between the two sites as
well. The respondents were equally happy with the majority of attributes of their nursing
documentation system and the quality of the information provided by such a system, whether
electronic or paper-based, although many carers at the electronic site reported the technical
difficulties they experienced, including running speed and reliability issues. Several
respondents acknowledged that the electronic documentation system enabled them to make
more sense of what they read and thus enable them to give more precise care to their clients.

Eleven weeks into the electronic documentation trial, 90 per cent of carers (9 out of 10)
interviewed said that they did not need more training lessons, but more practice with the
electronic system. Only one carer expressed difficulty in using the electronic system because
of a lack of basic keyboard skill. This led her to avoid the task of documentation.
For the majority of carers, the main challenge in nursing documentation appeared to be articulating what should be documented, rather than using electronic or paper-based documentation system. Eighty per cent of carers (20 out of 25) supported their organisation’s decision to implement clinical IT systems. These results suggest that the carers are ready to go electronic.
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CONFLICT OF INTEREST

The author has no financial interest related to this work.

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Author Name: Ping Yu

Author Contributions: The author is fully responsible for research design, acquisition of subjects and data, analysis and interpretation of data, and preparation of manuscript.

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References
